CPSC 326: Reading Assignment 2
Due Tuesday, January 26

Read the following and then answer the questions below. Turn in your answers separately from your programming homework. Be sure your answers are organized and clearly written (or typed).

- Ch. 5: 5.1–5.4

1. What is the difference between a reserved word and a keyword? Do you think it is a good idea to support keywords in a language? Do you see any similarities between keywords and operator overloading? Do you think it is a good idea to support operator overloading in a language?

2. Briefly describe in your own words the difference between an “r-value” and an “l-value” as discussed in the textbook.

3. In your own words describe the difference between static and dynamic variable bindings. Give an example of each within C++.

4. In your own words explain the difference between explicit and implicit type declarations. What is the relationship, if any, between type inference (like in Haskell) and explicit/implicit type declarations?

5. In your own words explain the the difference between static and dynamic type bindings. According to the book, what is the major disadvantage of languages that use dynamic type bindings?

6. Create a 2x2 matrix comparing languages according to whether they use static-vs-dynamic type bindings and explicit-vs-implicit type declarations. The cells of your matrix should contain a programming language that uses the specific binding and declaration (for each of the four possible combinations).

7. Briefly summarize the differences among static variables, stack-dynamic variables, and (explicit) heap-dynamic variables in terms of how variables are bound to memory. Give a concrete example (i.e., fragments of code) in a language of your choice that demonstrate each of these.